Sheet <u>1</u> of <u>5</u>

| Substitute For          | m PTO-1449                                   |                  | ment of Commerci<br>d Trademark Offici |                                   |          | Application No<br>09/539,343 |                                       |
|-------------------------|--|------------------|--|-----------------------------------|----------|------------------------------|---------------------------------------|
| In                      | ~\ +   | Disclosure State | ment                                   | Applicant<br>Dean P. Macri et al. |          |                              |                                       |
| JAN                     | JAN 0 7 2003 gs several sheets if necessary) |                  |  | Filing Date<br>March 31, 2000     |          | Group Art Unit               | 17.                                   |
| 2437 CFR §1.98          | £  |                  | IIS Pater                              | t Documents                       |          |                              |                                       |
| Examiner                | Desig.                                       | Document         | Publicatio                             |                                   |          |                              | Filing Date                           |
| Initial /               | ID   | Number           | n Date                                 | Patentee                          | Class    | Subclass                     | If Appropriate                        |
| 191ky                   | AA   | 4,600,919        | 07-1986                                | Stern                             | <u> </u> |                              |                                       |
| $-\mu$                  | AB   | 4,747,052        | 05-1988                                | Hishinuma et al.                  |          |                              |                                       |
|                         | AC   | 4,835,712        | 05-1989                                | Drebin et al.                     | $\mid$   |                              |                                       |
|                         | AD   | 4,855,934        | 08-1989                                | Robinson                          |          |                              |                                       |
|                         | AE   | 4,901,064        | 02-1990                                | Deering                           |          |                              |                                       |
|                         | AF   | 5,124,914        | 06-1992                                | Grangeat                          |          |                              |                                       |
|                         | AG   | 5,163,126        | 11-1992                                | Einkauf et al.                    |          |                              |                                       |
|                         | AH   | 5,371,778        | 12-1994                                | Yanof et al.                      |          |                              |                                       |
| ·                       | AI   | 5,611,030        | 03-1997                                | Stokes                            |          |                              |                                       |
|                         | AJ   | 5,731,819        | 03-1998                                | Gagne et al.                      |          |                              |                                       |
|                         | AK   | 5,757,321        |  | Billyard                          |          | (                            |                                       |
|                         | . AL   | 5,786,822        |  | Sakaibara                         |          |                              |                                       |
|                         | AM   | 5,805,782        |  | Foran                             |          |                              |                                       |
|                         | AN   | 5,809,219        |  | Pearce et al.                     |          |                              |                                       |
|                         | AO   | 5,812,141        |  | Kamen et al.                      |          |                              |                                       |
|                         | AP   | 5,847,712        |  | Salesin et al.                    |          |                              |                                       |
|                         | AQ   | 5,894,308        |  | Isaacs                            |          |                              |                                       |
|                         | AR   | 5,929,860        |  | Норре                             |          |                              |                                       |
|                         | AS   | 5,933,148        |  | Oka et al.                        |          |                              |                                       |
|                         | AT   | 5,949,969        |  | Suzuoki et al.                    | †        |                              |                                       |
|                         | AU   | 5,966,133        |  |                                   | <b>†</b> |                              | · · · · · · · · · · · · · · · · · · · |
|                         | AV   | 5,966,134        |  | Hoppe                             |          |                              |                                       |
|                         | AW   |                  |  | Arias                             | , ,      |                              |                                       |
|                         | AX   | 5,974,423        |  | Margolin<br>Strendhore            |          |                              |                                       |
|                         | AY   | 6,054,999        |  | Strandberg                        | -'       |                              |                                       |
|                         | AZ   | 6,057,859        |  | Handelman et al.                  |          |                              |                                       |
| <b>├──</b> <i>┼</i> ──┥ | AAA  | 6,078,331        |  | Pulli et al.                      | $\vdash$ |                              |                                       |
|                         |  | 6,115,050        | 09-2000                                | Landau et al.                     |          |                              |                                       |

r - j

.

.

1

|   | _ ,   |
|---|---|
| Examiner Signature  | Date Considered   |
| M. Good-Johnson   | £115/2005   |
|   |   |
| EXAMINER: Initials citation considered. Draw line through citation if not | in conformance and not considered. Include copy of this form with |
| next communication to applicant.  |   |

Substitute Disclosure Form (PTO-1449)

Sheet 2 of 5

| Substitute For |  |              |            | Attorney's Docket No. Application No.   10559-154001 09/539,343 |                                   |                          |                |
|----------------|--|--------------|------------|---|-----------------------------------|--------------------------|----------------|
| 1              | Information Disclosure Statement<br>by Applicant |              |            |   | Applicant<br>Dean P. Macri et al. |                          |                |
|                | JAN 0 7 2005 (Up several sheets if necessary)    |              |            |   |                                   | Group Art Unit<br>2672 A | 677            |
| A TRADE        | Al <sup>2</sup>                                  | · ···        |            | nt Documents  |                                   |                          |                |
| Examiner       | Desig.   | Document     | Publicatio | IL Documents  | <u> </u>                          |                          | Filing Date    |
|                | <u>ID</u>  | Number       | n Date     | Patentee  | Class                             | Subclass                 | If Appropriate |
| MUL            | ABB  | 6,175,655    | 01-2001    | George et al.   | ت<br>ا                            |                          |                |
|                | ACC  | 6,191,787    | 02-2001    | Lu et al.   |                                   |                          |                |
|                | ADD  | 6,191,796    | 02-2001    | Tarr  |                                   |                          |                |
|                | AEE  | 6,198,486    | 03-2001    | Junkins et al.  |                                   |                          |                |
|                | AFF  | 6,201,549    | 05-2001    | Bronskill   |                                   |                          |                |
|                | AGG  | 6,208,347    | 03-2001    | Migdal et al.   | -                                 |                          |                |
|                | AHH  | 6,219,070    | 04-2001    | Baker et al.  |                                   |                          |                |
|                | AII  | 6,239,808    | 05-2001    | Kirk et al.   | -                                 |                          |                |
|                | AJJ  | 6,252,608    | 06-2001    | Snyder et al.   |                                   |                          |                |
|                | AKK  | 6,262,737    | 07-2001    | Li et al.   |                                   |                          |                |
|                | ALL  | 6,262,739    | 07-2001    | Migdal et al.   |                                   |                          |                |
|                | AMM  | 6,292,192    | 09-2001    | Moreton   |                                   | >                        |                |
|                | ANN  | 6,317,125    | 11-2001    | Persson   | /                                 |                          |                |
|                | A00  | 6,337,880    | 01-2002    | Cornog et al.   | Ć,                                |                          |                |
|                | APP  | 6,388,670    | 05-2002    | Naka et al.   |                                   |                          |                |
|                | AQQ  | 6,405,071    | 06-2002    | Analoui   |                                   |                          |                |
|                | ARR  | 6,437,782    | 08-2002    | Pieragostini et al.   |                                   |                          |                |
|                | ASS  | 6,478,680    |            | Yoshioka et al.   |                                   |                          |                |
|                | ATT  | 6,559,848    | 05-2003    | O'Rourke  |                                   | `                        |                |
|                | AUU  | 6,593,924    | 07-2003    | Lake et al.   |                                   |                          |                |
|                | AVV  | 6,593,927    | 07-2003    | Horowitz et al.   |                                   |                          |                |
|                | AWW  | 6,608,627    | 08-2003    | Marshall et al.   |                                   |                          |                |
|                | AXX  | 6,608,628    | 08-2003    | Ross et al.   |                                   |                          |                |
|                | ΑΥΥ  | 2001/0026278 | 10-2001    | Arai et al.   |                                   |                          |                |
|                | AZZ  | 2002/0101421 | 08-2002    | Pallister   | /                                 |                          |                |

٠

| Foreign Patent Documents or Published Foreign Patent Applications  |               |          |             |            |       |          |             |  |
|--|---------------|----------|-------------|------------|-------|----------|-------------|--|
| Examiner   | Desig.        | Document | Publication | Country or | Class | Subclass | Translation |  |
| Examiner Signature<br>M. M. Down Date Considered<br>15/05<br>EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with |               |          |             |            |       |          |             |  |
| next communi   | cation to app | licant.  |             |            |       |          |             |  |

Sheet <u>3</u> of <u>5</u>

| Substitute Form PTO-1449 | U.S. Department of Commerce<br>Patent and Trademark Office | Attomey's Docket No.<br>10559-154001 | Application No. 09/539,343  |    |  |
|--------------------------|--|--------------------------------------|-----------------------------|----|--|
| Information Disc         | closure Statement  | Applicant<br>Dean P. Macri et al.    |                             |    |  |
| CFR §1.98(b)             | eets if necessary)   | Filing Date<br>March 31, 2000        | Group Art Unit<br>2672 2677 |    |  |
| C TRAITENE               |  |                                      |                             |    |  |
|                          |  |                                      | Yes                         | No |  |
| AAAA                     |  |                                      |                             |    |  |

•

.,

|          | Other D           | ocuments (include Author, Title, Date, and Place of Publication)  |
|----------|-------------------|---|
| Examiner | Desig.            |   |
| Initial  | ID                | Document  |
| MUL      | ABBB              | Alliez et al., "Progressive Compression for Lossless Transmission of Triangle<br>Meshes," <u>ACM SIGGRAPH 2001</u> , pgs. 195 - 202 (2001).   |
|          | ACCC              | Appel, Arthur, "The Notion of Quantitative Invisibility and the Machine Rendering of Solids." Proceedings of 22nd National Conference Association for Computing Machinery 1967.                           |
|          | ADDD              | Bajaj et al., "Progressive Compression and Transmission of Arbitrary Triangular Meshes," IEEE, pgs. 307 - 316 (1999).   |
|          | AEEE              | Buck et al., "Performance-Driven Hand Drawn Animation", <u>ACM</u> (NPAR2000), pgs. 101 - 108 (2000).   |
|          | AFFF              | Catmull et al., "Recursively Generated B-Spline Surfaces on Arbitrary Topological Meshes," Computer Aided Design, 10(6):350 - 355 (1978).   |
|          | AGGG              | Chow, M., "Optimized Geometry Compression for Real-time Rendering," <u>IEEE</u> , pgs. 347-354 (1997).  |
|          | АННН              | Coelho et al., "An Algorithm for Intersecting and Trimming Parametric Meshes", <u>ACM SIGGRAPH</u> , pgs. 1 - 8 (1998).   |
|          | AIII              | Cohen-Or, D. et al., "Progressive Compression of Arbitrary Triangular Meshes,"<br>IEEE Visualization 99 Conference Proc., pgs. 67 - 72 (1999).  |
|          | AJJJ              | Deering, M., "Geometry Compression," Computer Graphics. SIGGRAPH '95, pages 13-20, 1995.  |
|          | AKKK              | DeRose et al., "Subdivisional Surfaces in Character Animation", <u>ACM</u> ,<br>SIGGRAPH'98, pgs. 85 - 94 (1998).   |
|          | ALLL              | Dyn, N. et al., "A Butterfly Subdivision Scheme for Surface Interpolation with<br>Tension Control," <u>ACM Transactions on Graphics</u> , 9(2):160 - 169 (1990).  |
|          | AMMM              | Elber, Gershon, "Line Art Rendering via a Coverage of Isoperimetric Curves,"<br>IEEE Transactions on Visualization and Computer Graphics, 1(3):231 - 239 (1995).  |
|          | ANNN              | Elber, Gershon, "Interactive Line Art Rendering of Freeform Surfaces",<br>Eurographics'99, 18(3):C1 - C12 (1999).   |
|          | <sup>-</sup> A000 | Gooch et al., "A Non-Photorealistic Lighting Model for Automatic Technical<br>Illustration," <u>Computer Graphics Proceedings, Annual Conference Series,</u><br><u>SIGGRAPH'98</u> , pgs. 447-452 (1998). |
|          | APPP              | Gooch et al., "Interactive Technical Illustration," <u>ACM Interactive 3D</u> , pgs. 31 - 38 (1999).  |

|                                 |                   |                            |                     | . 1            | ,                       |              |
|---------------------------------|-------------------|----------------------------|---------------------|----------------|-------------------------|--------------|
| Examiner Signature              |                   | 1.1                        | Date Considered     | 01.21          |                         |              |
| 7/1.                            |                   | Johnson                    |                     | · / · / ·      | 005                     |              |
| EXAMINER: Initials citation cor | nsidered. Draw li | ing through citation if no | t in conformance an | d not consider | red. Include copy of th | is form with |
| next communication to applican  | ı <b>t.</b>       | V -                        |                     |                |                         |              |

Sheet <u>4</u> of <u>5</u>

|                 |            |   |  | Sheet $\underline{4}$ of $\underline{5}$ |  |  |  |
|-----------------|------------|---|--|--|--|--|--|
| Substitute For  | m PTO-1449 | U.S. Department of Commerce<br>Patent and Trademark Office  | Attomey's Docket No.<br>10559-154001                           | Application No.<br>09/539,343            |  |  |  |
|                 | - 1        | n Disclosure Statement<br>by Applicant  | Applicant<br>Dean P. Macri et al.                              |  |  |  |  |
| JAN 0 7 21      | (Line sev  | veral sheets if necessary)  | Filing Date  | Group Art Unit                           |  |  |  |
| 47 CFR §1.98(b) |            |   | March 31, 2000   | 2672 2677                                |  |  |  |
| A TRADEY        | Othor D    | ooumonte (include Author 1  | Fitie Date and Diago a   | 6 Dublication)                           |  |  |  |
| Examiner        | Desig.     | ocuments (include Author, 1   | Title, Date, and Place o                                       | r Publication)                           |  |  |  |
| Initial         | ID         |   | Document   |  |  |  |  |
| ANY             | AQQQ       | Heidrich et al., "Realistic, Hard<br>(SIGGRAPH'99), pgs. 171 - 17   |  | and Lighting," <u>ACM</u> ,              |  |  |  |
| , p             | ARRR       | Hoppe, H., "Progressive Meshe<br>http://www.research.microsft.co  | s," URL:   | e/. (10 pgs.)                            |  |  |  |
|                 | ASSS       | Hoppe, H., "Efficient Implemer<br>Graphics, 22(1), pgs. 27 - 36 (1  | ntation of Progressive Mes                                     | hes," Comput. &                          |  |  |  |
|                 | ATTT       | Hoppe, H., "View-Dependent R<br>http://www.research.microsoft.c   | efinement of Progressive I                                     | Meshes", URL:                            |  |  |  |
|                 | AUUU       | Kumar et al., "Interactive Displa<br>On Interactive 3D Graphics, pg   | ay of Large Scale NURBS<br>s. 51 - 58 (1995).                  | Models", <u>ACM</u> , Symp.              |  |  |  |
|                 | AVVV       | I ake et al "Stylized Pendering Techniques for Scalable Pool Time 2D  |  |  |  |  |  |
|                 | AWWW       | Lander, Jeff, "Making Kine More Flexible,"Game Developer Magazine, 5 pgs.,<br>November 1998.  |  |  |  |  |  |
|                 | AXXX       | Lander, Jeff, "Skin Them Bones  | s," Game Developer Maga  | zine, 4 pgs., May 1998.                  |  |  |  |
|                 | AYYY       | Lansdown et al., "Expressive Rendering: A Review of Nonphotorealistic<br>Techniques," IEEE Computer Graphics & Applications, pgs. 29-37 (1995).                                 |  |  |  |  |  |
|                 | AZZZ       | Lasseter, J. et al., "Principles of Traditional Animation Applied to 3D Computer<br>Animation," <u>ACM</u> , pgs. 35 - 44 (1987).   |  |  |  |  |  |
|                 | AAAAA      | Lee M et al "Navigating Through Triangle Meshes Implemented as Linear   |  |  |  |  |  |
|                 | ABBBB      |   |  |  |  |  |  |
|                 | ACCCC      | Ma et al., "Extracting Feature L<br>292 (1997).   | ines for 3D Unstructured (                                     | Grids," <u>IEEE</u> , pgs. 285 -         |  |  |  |
|                 | ADDDD      | Markosian, L. et al., "Real-Time<br>pgs. (1997).  | e Nonphotorealistic Rende                                      | ring," SIGGRAPH'97, 6                    |  |  |  |
|                 | AEEEE      | Pajarola et al., "Compressed Pro<br>Visualization and Computer Gra  | ogressive Meshes" <u>IEEE T</u><br>aphics, 6(1):79 - 93 (2000) | ransactions on                           |  |  |  |
|                 | AFFFF      | Pedersen, "A Framework for Int<br>295 - 301 (1996).   | teractive Texturing on Cur                                     |  |  |  |  |
|                 | AGGGG      | "pmG Introduces Messiah: Animate 3.0", URL:<br>http://www.digitalproducer.com/aHTM/Articles/july_2000/july_17_00/pmg_intros<br>messiah_animate.htm (Accessed 10/26/2004) 2 pgs. |  |  |  |  |  |
| Examiner Sign   | 7/l.       | Lord-Johnson  | Date Considered  | 005                                      |  |  |  |

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Disclosure Form (PTO-1449)

Sheet <u>5</u> of <u>5</u>

| Substitute For<br>(Modified)P | m PTO-1449                                | U.S. Department of Commerce<br>Patent and Trademark Office   | Attorney's Docket No.<br>10559-154001  | Application No.<br>09/539,343   |  |  |
|-------------------------------|---|--|--|---|--|--|
|                               | - 1                                       | n Disclosure Statement<br>by Applicant   | Applicant<br>Dean P. Macri et al.  |   |  |  |
| 11 -                          | JAN 0 7 (Use several sheets if necessary) |  | Filing Date  | Group Art Unit<br>2672 2677   |  |  |
|                               |   |  |  | -oit Alli   |  |  |
| THAU                          | Other D                                   | ocuments (include Author, 1  | litle, Date, and Place o   | f Publication)  |  |  |
| Examiner<br>Initial           | Desig.<br>ID                              | ocuments (include Author, 1  | Document   |   |  |  |
| ANYL                          | АНННН                                     | Popovic et al., 'Progressive Sin<br>http://www.research.microsft.co  |  | osoft Research,   |  |  |
| T P                           | AIIII                                     | Pueyo, X. et al., "Rendering Te<br>Workshop 1996, EUROGRAPH  |  |   |  |  |
|                               | ILLEA                                     | Raskar, R. et al., "Image Precisi<br>3D Graphics, <u>ACM</u> , pgs. 135-2  | ion Silhouette Edges," Syn   |   |  |  |
|                               | AKKKK                                     | Rockwood, A. et al., "Real-time Rendering of Trimmed Surfaces," Computer   |  |   |  |  |
|                               | ALLLL                                     | Samet, Hanan, "Applications of Spatial Data Structures: Computer Graphics, Image<br>Processing, and GIS," University of Maryland, Addison-Wesley Publishing<br>Company, 1060-1064, Reading, MA, June 1990  |  |   |  |  |
|                               | AMMMM                                     | Sousa, M., et al., "Computer-Generated Graphite Pencil Rendering of 3-D<br>Polygonal Models", Eurographics'99, 18(3):C195 - C207 (1999).   |  |   |  |  |
|                               | ANNNN                                     | Stam, J., "Exact Evaluation of C<br>Parameter Values", SIGGRAPH<br>Series, pgs. 395-404 (1998).  | Catmull-Clark Subdivision  | Surfaces at Arbitrary   |  |  |
|                               | A0000                                     | Taubin et al., "3D Geometry Co   | mpression", SIGGRAPH'9   | 8 Course Notes (1998)   |  |  |
|                               | APPPP                                     | Taubin et al., "Progressive Fore<br>Center, 9 pgs. (1998).   |  |   |  |  |
|                               | AQQQQ                                     | Thomas (Contributor) et al., "The second sec | he Illusion of Life: Disnev  | Animation" 47-51  |  |  |
|                               |   | Wilhelms, J. & Van Gelder, A.,<br>Santa Cruz [online], 1997 [retric<br><url: graphics.stanford.<="" http:="" td=""><td>"Anatomically Based Modeved 12/22/2004], retrieved<br/>edu/courses/cs448-01-sprin</td><td>leling," Univ. California<br/>I from the Internet:<br/>ng/papers/wilhelms.pdf&gt;.</td></url:>  | "Anatomically Based Modeved 12/22/2004], retrieved<br>edu/courses/cs448-01-sprin | leling," Univ. California<br>I from the Internet:<br>ng/papers/wilhelms.pdf>. |  |  |
|                               | ASSSS                                     | Zeleznik et al., "SKETCH: An<br>University site of the NSF Scier<br>and Scientific Visualization, 19   | Interface for Sketching 3D<br>ace and Technology Center<br>96                    | Scenes" Brown<br>for Computer Graphics  |  |  |
|                               | ATTTT                                     | Zorin "Interpolation Subdivision<br>of Computer Science, California  | n for Meshes With Arbitran<br>a Institute of Technology, I                       | ry Topology'' Department<br>Pasadena, CA                                      |  |  |

. .

| Examiner Signature              |  | Date Considered  | - |
|---------------------------------|--|--|---|
| M.                              | yord Johnson                               | 8/15/2005  |   |
| <b>~</b>                        |  |  |   |
| EXAMINER: Initials ditation con | isidered. Draw line through citation if no | ot in conformance and not considered. Include copy of this form with |   |
| next communication to applicant | L V -                                      |  |   |

٦

Substitute Disclosure Form (PTO-1449)